

Seasonal Fire Weather / Fire Danger Outlook

Northwest Geographic Area

(Final Version)



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**Paul Werth
Mike Fitzpatrick
Predictive Services
Northwest Interagency Coordination Center
Portland, Oregon**

Executive Summary

The following report is a **fire season severity assessment** based upon seasonal precipitation patterns, winter snowpack, drought, snowmelt dates, fire danger indices, fuel moisture information and long-range weather forecasts for the summer and fall. The potential severity of the fire season is determined using techniques that correlate weather, fuel moisture, and fire danger information with historical fire and resource demand records.

Many weather factors affect fire season severity in the Northwest Geographic Area. Known factors include: winter precipitation, mountain snowpack, drought, snowmelt date, June rainfall, live and dead fuel moisture, and the amount of summer dry lightning.

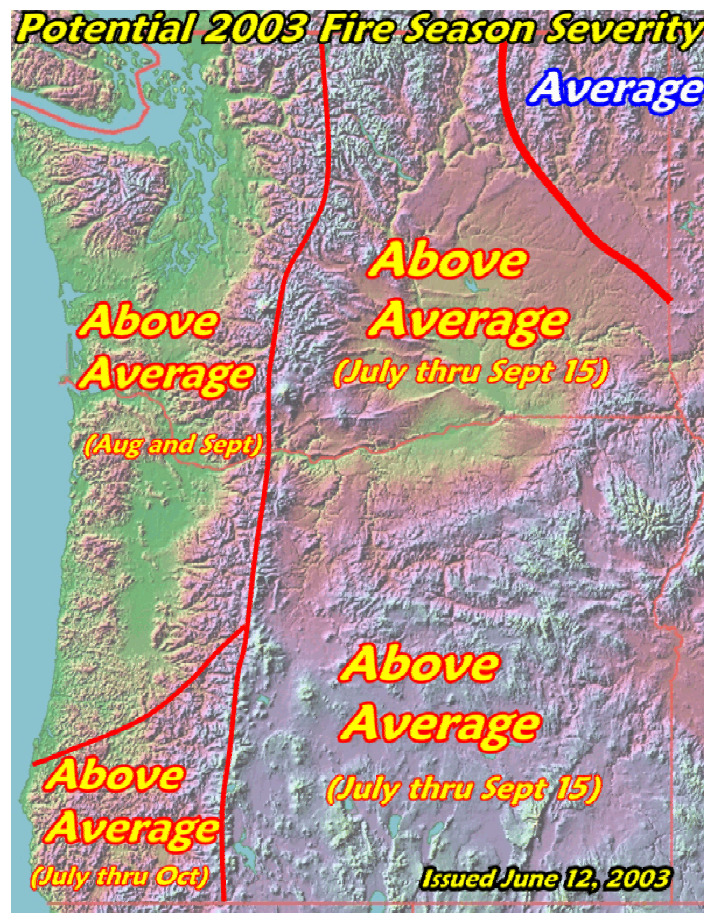
Washington and Oregon experienced an unusually mild winter this year, due in part to the return of El Nino. Although the lower elevations of eastern Washington and southwestern Oregon experienced near to above normal precipitation, April 1 mountain snowpacks were only 54% of average in Oregon and 75% in Washington due to the mild temperatures. Normally, mountain snowpacks peak around April 1 and gradually melt through the middle of June. Cool, wet weather in April and early May slowed snowmelt, especially in the higher elevations. However, the weather turned warm and dry the latter half of May and June resulting in rapid melt of the remaining snow.

El Nino declined during the spring and La Nina conditions are now developing in the tropical Pacific Ocean. However, the full effects of La Nina may not be felt until this fall and winter. The long-range forecast for the coming summer is based on this decline. July, August and September are favored to be warmer and drier than normal, especially in eastern Oregon. Summers in the Northwest are typically warm and dry, and this summer should be no different.

Drought conditions are expected to continue in eastern Oregon, and may expand north and westward into Washington and western Oregon during the summer. Statistics back to 1970 indicate Northwest summers tend to be drier than normal during transition from El Nino to La Nina conditions.

The following weather and fuel moisture factors correlate very well with past active fire seasons in the Northwest and are the basis for this year's fire season severity assessment. The 2003 outlook calls for an **ABOVE AVERAGE** fire season in the most of the Northwest (see map) for these reasons:

- Continued long term drought (4 consecutive years) in eastern Oregon



- Below normal winter snowpack throughout all of Washington and Oregon
- Early snowmelt, especially in the low and mid elevations
- A drier than normal May in most areas and a dry June
- Abundant fine fuel loadings due to early spring rains
- Lower fuel moisture and higher than normal fire danger indices for this time of year
- Long range forecasts and historical records that favor a drier than normal summer
- The two to three episodes of dry lightning that normally occur during the summer

Fire seasons following “El Nino” events typically result in a greater than average number of fires and acres burned on US Forest Service and State lands. These fires usually require a greater commitment of resources due to the complexity of terrain, fuels, values at risk, and threats to public and firefighter safety. An **ABOVE AVERAGE** 2003 fire season has the following management implications:

- A very active fire season in southern and eastern Oregon and most of eastern Washington, and a higher than normal risk west of the Cascades during “East Wind” episodes
- An elevated risk of long-duration timber fires
- An increased threat of extreme fire behavior conditions (i.e. crown fires, long range spotting, plume dominated fires)
- An increased threat to firefighter safety during critical fire weather and extreme fire behavior conditions
- A higher than normal demand for resources of all types
- An active fire season in multiple areas of the western United States resulting in stiff competition for resources
- Potential for limited availability of, or competition for air tankers and lead planes

With any fire season assessment, the occurrence of dry lightning is always a wild card. The amount and location of dry lightning can rapidly change the character of the fire season.